

PENDING CLAIMS**U.S. Patent Application No. 09/137,503****Filed: August 20, 1998****COJK Reference: WEYE-1-11558***1/10/03
NON-FINAL
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1. An absorbent composite comprising a first stratum, a second stratum, and a transition zone intermediate and coextensive with the first stratum and the second stratum;
the first stratum comprising synthetic fibers and a binder;
the second stratum comprising crosslinked cellulosic fibers and a binder ; and
the transition zone comprising fibers from the first stratum and the second stratum commingled substantially uniformly across the composite's width and along the composite's length.
6. The composite of Claim 1 wherein the first stratum is substantially homogeneous.
7. The composite of Claim 1 wherein the second stratum is substantially homogeneous.
8. The composite of Claim 1 wherein the first stratum has a pore size greater than the pore size of the second stratum.
9. The composite of Claim 1 wherein the first stratum has a density in the range from about 0.01 to about 0.3 g/cm³.
10. The composite of Claim 1 wherein the second stratum has a density in the range from about 0.03 to about 0.5 g/cm³.

11. The composite of Claim 1 wherein the first stratum has a basis weight in the range from about 10 to about 100 gsm.

12. The composite of Claim 1 wherein the second stratum has a basis weight in the range from about 10 to about 500 gsm.

13. The composite of Claim 1 wherein the synthetic fibers comprise polyethylene terephthalate fibers.

14. The composite of Claim 1 wherein the synthetic fibers are selected from the group consisting of polyethylene, polypropylene, nylon, latex, and rayon fibers.

15. The composite of Claim 1, wherein the first stratum further comprises natural fibers, wherein the natural fibers are cellulosic fibers selected from the group consisting of cotton, wool, wood pulp, straw, and kenaf fibers.

16. The composite of Claim 1 wherein at least one binder comprises a fibrous binding material.

17. The composite of Claim 16 wherein the fibrous binding material comprises bicomponent binding fibers.

18. The composite of Claim 1 wherein at least one binder comprises a wet strength agent.

19. The composite of Claim 1 wherein the first stratum comprises fibers having a length from about 0.25 to about 1.5 inches.

20. The composite of Claim 1 wherein the first stratum comprise fibers having denier from about 5 to about 20.

21. The composite of Claim 1 wherein the first stratum comprises crimped fibers.

22. The composite of Claim 21 wherein the crimped fibers have from about 5 to about 15 crimps per inch.

23. The composite of Claim 21 wherein the crimped fibers are present in the stratum in an amount from 50 to 100% by weight of total fibers in the stratum.

26. The composite of Claim 1 wherein the hydrophilic fibers comprise chemi-thermomechanical pulp fibers.

31. An absorbent composite comprising a first stratum, a second stratum, and a transition zone therebetween and integrally connecting the first and second strata;

the first stratum comprising polyethylene terephthalate fibers and bicomponent binding fibers;

the second stratum comprising crosslinked cellulosic fibers and bicomponent fibers;
and

the transition zone comprising fibers from one stratum extending into the other stratum.

32. An absorbent composite comprising a first stratum, a second stratum, and a transition zone intermediate and coextensive with the first stratum and the second stratum;

the first stratum comprising polyethylene terephthalate fibers and bicomponent binding fibers;

the second stratum comprising crosslinked cellulosic fibers and a wet strength agent; and

the transition zone comprising fibers from the first stratum and the second stratum commingled substantially uniformly across the composite's width and along the composite's length.

75. A foam-formed absorbent composite comprising a first stratum, a second stratum, and a transition zone intermediate and coextensive with the first stratum and the second stratum;

the first stratum comprising synthetic fibers and a binder;

the second stratum comprising crosslinked cellulosic fibers and a binder; and

the transition zone comprising fibers from the first stratum and the second stratum commingled substantially uniformly across the composite's width and along the composite's length.

76. The composite of Claim 75 wherein the synthetic fibers comprise polyethylene terephthalate fibers.

77. The composite of Claim 75 wherein at least one binder is one of bicomponent binder fibers and a wet strength agent.

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